Enhancement of Data Aggregation Grid based Coverage Ratio using Overlap Sensing Ratio with AWGN Channel in Heterogeneous WSNs

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Abstract

Heterogeneous wireless sensor network (H-WSN) consists of sensor nodes with different ability, such as different computing power and sensing range. In this Research paper, the improved - enhance coverage overlapping sensing ratio (I-ECOSR) scheme for data aggregation in grid based WSNs is proposed. Here, the focus was on two main problems i.e. in the area coverage problem, the coverage performance of the covered region was enhanced while in the dead node coverage problem; the coverage performance on the number of covered area by maximum efficient energy node for heterogeneous network with different communication and sensing range. It is based on the random wave point sensor model used to approximate the behavior of sensor nodes. According to experimental results, the proposed method can achieve higher coverage and sensing range for the position of dead node by shifting a higher energy node in one grid in order to overlap the lower energy node in other grid which comes under the sensing range of the advanced node which can be improving network lifetime & recover data loss crises for data aggregation technique by using I-ECOSR with AWGN channel, which is simulated in MATLAB 2012a.
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References


Index Terms

Computer Science    Wireless

Keywords

H-WSN, sensing ratio, directional sensor nodes, AWGN, Node Energy.